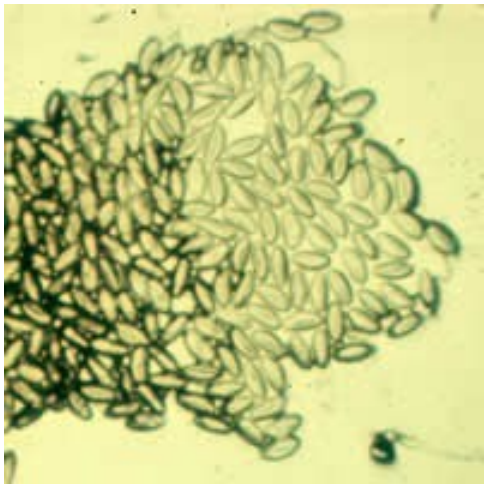
Enterobius vermicularis - Pinworm



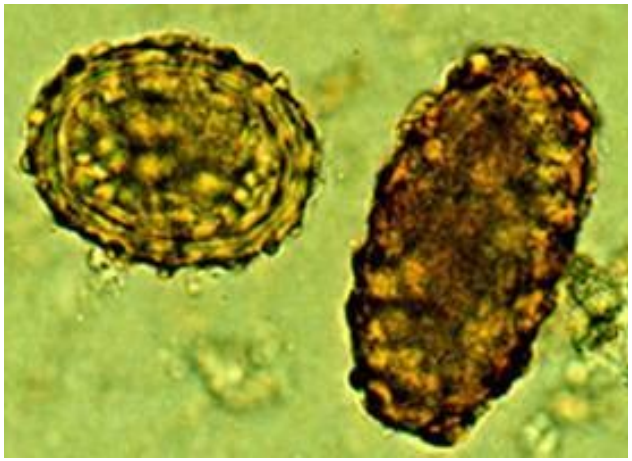
- Eggs
  - 50-60 x 20-30 µm
  - Flattened on one side
  - Masses can be seen on scotch tape prep
- Adults seen in perianal area
  - Mostly females
  - 8-13 mm
  - Long pointed tail
  - Cephalic inflations, lateral alae, oxyurid esophagus (corpus, isthmus, bulb)

Source: DPDx Parasite Image

Bottom two images from Parasites and Parasitological Resources

Ascaris lumbricoides -Roundworm

- Adults
  - Females (shown) 20-50 cm, have a girdle (shown) if unfertilized
  - Males 15-30 cm, curved tail
- Eggs
  - 45-70 x 35-50 µm
  - Mammillated outer layer
  - Decorticate eggs w/o mammillated layer still fertile
  - Infertile eggs 90 x 40 µm, sloppy mammillations



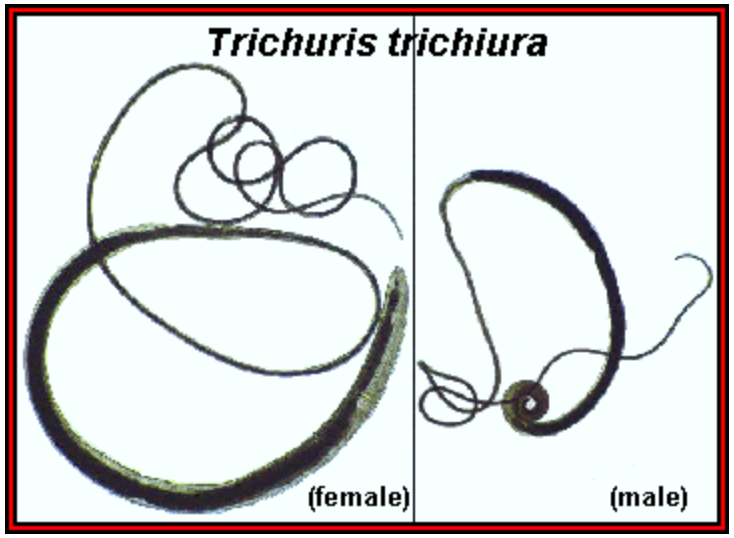
Fertile

Infertile

All fertile, bottom one decorticate

Source: DPDx Parasite Image

Trichuris trichiura - Whipworm



From Parasites & Parasitology Resources

Source: DPDx
Parasite Image

- Adults
  - Whip like anterior & thick posterior end
  - Females 30-50 mm
  - Males 30-45 mm, coiled tail
- Eggs
  - 52 x 22 µm
  - Dark thick shell
  - Bipolar mucoid plugs

Hookworms vs *Strongyloides*

Eggs

- Thin colorless shell
- Embryo in early cleavage
- 60-75 x 35-40 µm

Strongyloides L-1

Hookworm L1

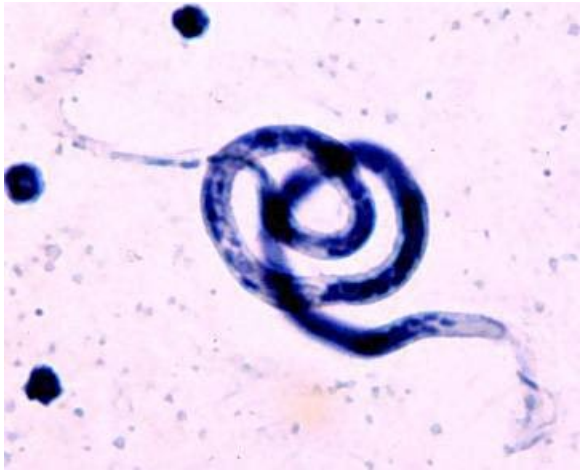
	Strongyloides	Hookworm
BC	Short	Long
GP	Prominent	Indescript

BC = buccal capsule GP = genital primordium

Source: DPDx Parasite Image

Filaria in blood

W. bancrofti



B. malayi

- *Wuchereria bancrofti*
  - sheathed
  - 250-300 um
  - pointed tail w/ nuclei stopping short of the end
- *Brugia malayi*
  - sheathed, stains pink w/ Giemsa
  - 175-230 um
  - tapered tail w/ constriction separating last 2 nuclei

Source: DPDx Parasite Image

Filaria in blood (cont.)

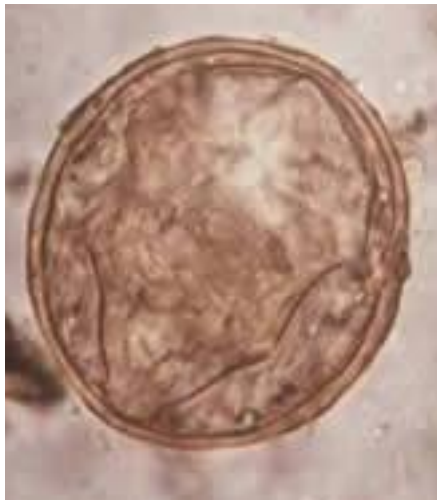
M. ozzardi

M. perstans top
Loa loa bottom

- *Mansonella ozzardi*
  - Unsheathed
  - 160-200 um
  - long slender tail, nuclei stop far short of tip
- *M. perstans*
  - Unsheathed
  - 190-200 um
  - tail blunt w/ nuclei to tip
- *Loa loa*
  - Sheathed
  - 230-250 um
  - tapered tail w/ nuclei to the tip

Source: DPDx Parasite Image

Schistosomes



S. japonicum eggs

S. mansoni

S. haematobium

Source: DPDx Parasite Image

All schisto eggs are embryonated

S. japonicum

- 70-100 x 55-65 um
- Small lateral spine
- Often crusted with crud

S. mansoni

- 115-175 x 45-70 um
- Large lateral spine

S. haematobium

- 155-170 x 40-70 um
- Large terminal spine

Clonorchis, Paragonimus, Fasciolids

Clonorchis

Paragonimus

Fasciolid eggs

- *Clonorchis*
  - *Opisthorchis* similar
  - Shouldered operculum
  - 20-30 x 15-17 µm
  - Abopercular knob
- *Paragonimus*
  - 80-120 x 50-65 um
  - Operculate
  - Abopercular thickening
  - “Top-heavy”
- Fasciolid Eggs
  - Operculate
  - Unembryonated
  - 130-150 x 60-100 µm

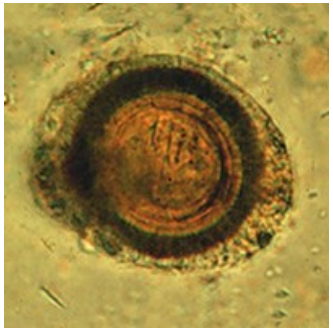
Source: DPDx
Parasite Image

Diphyllobothrium latum – Broad Fish Tapeworm

- Adults up to 12 meters
- Scolex w/ 2 bothria
- Gravid proglottids are wider than long w/ a rosette shaped uterus
- Eggs
  - Operculate (arrow)
  - Abopercular knob
  - 60x90 µm

Source: DPDx
Parasite Image

Taenia saginata & T. solium



T. saginata

T. solium

Source: DPDx Parasite Image

Eggs

- Thick striated shell
- Contains 6-hooked oncosphere
- Impossible to speciate between *T. solium* & *T. saginata*

Gravid proglottids

- *T. saginata* - 15-20 uterine branches
- *T. solium* - 7-13 uterine branches

Hymenolepis diminuta & H. nana

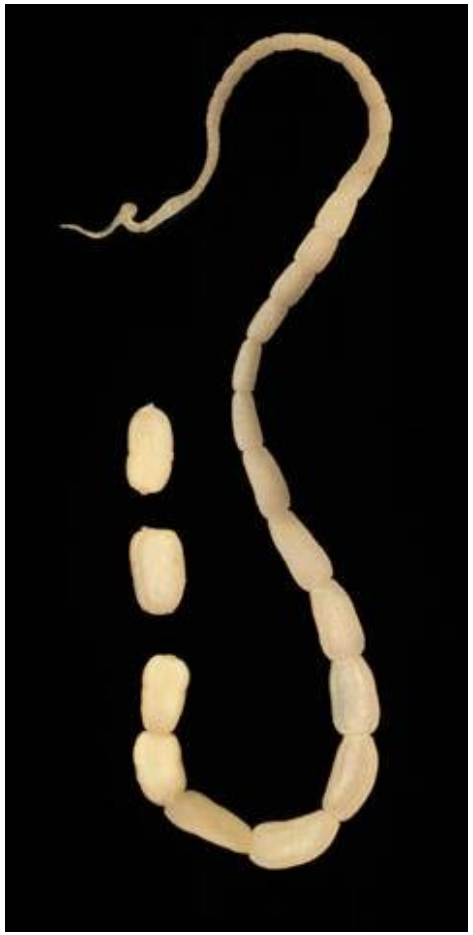
H. diminuta

H. nana

- *Hymenolepis diminuta*
  - 70-85 x 60-80 um
  - 6-hooked oncosphere
  - ruffled membrane surrounding oncosphere
- *H. nana*
  - 30-50 um
  - 6-hooked oncosphere
  - two polar thickenings w/ filaments

Source: DPDx
Parasite Image

Dipylidium caninum – Dog tapeworm



- Adults
  - 10-70 cm
  - Scolex w/ armed rostellum
- Proglottids
  - Longer than wide, one genital pore on each side
  - Shed in stool, resemble rice or sesame seeds
  - Motile
- Eggs
  - Packets of 10-15 eggs, each 25-40 um
  - 6-hooked oncosphere

Source: DPDx Parasite Image